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PATENT

6. (Three times amended herein) A method of forming a semiconductor device comprising:

providing a semiconductor substrate having a first region where a first oxide layer thickness is desired and a second region where a second oxide layer thickness is desired;

introducing a halogen-containing impurities into said semiconductor substrate to form a higher halogen concentration in said first region than in said second region;

performing an oxidizing process on said semiconductor substrate to simultaneously form said first oxide layer thickness at said first region and said second oxide layer thickness at said second region; and

wherein introducing said halogen-containing impurities comprises introducing halogen-containing impurities into said first region at a first concentration and introducing halogen-containing impurities into said second region at a second concentration, said first concentration greater than said second concentration, both said first and second concentrations [having] formed of a dosage of said halogen-containing impurities greater than about 1×10^{14} carriers/cm².

20. (Twice amended herein) A method of forming a semiconductor integrated circuit, said method comprising:

providing a semiconductor substrate, said semiconductor substrate comprising a memory cell region, a first region for a MOS transistor, and a second region for a high voltage device;

forming a gate dielectric layer comprising an oxide overlying said semiconductor substrate including said first region and said second region;

selectively implanting halogen-containing impurities through said gate dielectric layer and into said second region, said halogen-containing impurities [having a concentration] formed of a dosage greater than about 1×10^{14} carriers/cm², said selectively implanting at an implant energy that is about 0.1 keV to about 40 keV; and

simultaneously forming a first thickness of dielectric material overlying said first region and forming a second thickness of dielectric material overlying said second region by an oxidizing process.

21. (Three times amended herein) The method of claim 20

wherein said selectively implanting halogen-containing impurities into said first region also includes selectively implanting halogen-containing impurities into said second region such that said first region has a greater halogen concentration than said second region, said halogen [concentration] -containing impurities in said second region [being] formed of a dosage greater than about 1×10^{14} carriers/cm² and less than about 1×10^{15} carriers/cm².

27. (Twice amended herein) A method of forming a semiconductor device comprising:

providing a semiconductor substrate having a first region where a first oxide layer thickness is desired, a second region where a second oxide layer thickness is desired, and a third region where a third oxide layer thickness is desired;

introducing a halogen-containing impurities into said semiconductor substrate to form a higher halogen concentration in said first region than in said second region, and a different halogen concentration in said third region than in said first region and said second region, each of said higher halogen concentration and said different halogen concentration formed of a dosage being in excess of about 1×10^{14} carriers/cm²; and

performing an oxidizing process on said semiconductor substrate to simultaneously form said first oxide layer thickness at said first region and said second oxide layer thickness at said second region.

29. (Once amended herein) The method of claim 6 wherein at least one of said first and second concentrations formed of a dosage of said halogen-containing impurities [is] greater than about 1×10^{14} carriers/cm² and less than about 1×10^{15} carriers/cm².

REMARKS

Claims 2, 4-16 and 20-31 have been examined. Claims 6, 20, 21, 27 and 29 have been amended. No claims have been either added or canceled; hence, claims 2, 4-16, and 20-31 are now pending. Reconsideration of the subject application as amended is respectfully requested.